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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,553	03/04/2002	Itaru Nishioka	Y2238.0002/P002	5328

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EXAMINER	
TRAN, DZUNG D	

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/086,553	NISHIOKA ET AL.	
	Examiner	Art Unit	
	Dzung D. Tran	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 March 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Gerstel et al. U.S. Publication no. 2004/0165888.

Regarding claims 1 and 12, Gerstel discloses in Figures 4 and 10, a network node apparatus 130 having an input terminal RX 142 and an output terminal TX 140 being each connected to a transmission line 152, 154, 158, 160, which forms a bi-directional transmission path via said transmission line to another network node apparatus, comprising switching means 144, 146, 148, 150 for switching a signal sent out via said transmission path from said another network node apparatus to be folded back and output to said another network node apparatus again (see Figure 10).

Regarding claims 2 and 13, Gerstel discloses in Figures 6 and 7, an Add/Drop Multiplexer 84, 86 for demultiplexing a wavelength multiplexed signal entered from said transmission line and for multiplexing the wavelength demultiplexed signal again by

exchanging said wavelength demultiplexed signal into a predetermined route (page 2, paragraph 0031).

Regarding claims 3 and 14, Gerstel discloses transponder 4 (equivalent to wavelength conversion means) for converting the wavelength of the signal sent out from said another network node apparatus into the wavelength of said wavelength demultiplexed signal (see Figure 4).

Regarding claims 4 and 15, Gerstel discloses in Figures 5-7, a test signal sending component for sending out a test signal into said transmission path in response to occurrence of a fault in said transmission line or said another network node apparatus, wherein said switching means switches the test signal sent out via said transmission path from said another network node apparatus to be folded back and output to said another network node apparatus again (page 2, paragraphs 0030-0031).

Regarding claims 5 and 16, Gerstel discloses in Figures 5-7, a test signal sending component for sending out a test signal into said transmission path in response to occurrence of a fault in said transmission line or said another network node apparatus, wherein said switching means switches the test signal sent out via said transmission path from said another network node apparatus to be folded back and output to said another network node apparatus again, and said transponder 4 (equivalent to wavelength conversion means) converts the wavelength of the test signal into the wavelength of signal on said transmission line where the fault has occurred (page 2, paragraphs 0030-0031).

Regarding claims 6 and 17, Gerstel discloses in Figure 2, a management interface controller 48 (equivalent to determination means) for determining the signal quality of the test signal by receiving the test signal to effect transmission control over said test signal sending component in accordance with the determination result (Figure 5, S118, S120).

Regarding claims 7 and 18, Gerstel discloses in Figure 3 for receiving the test signal, and a determination portion for determining the presence or absence of the fault by comparing the signal quality of the test signal received by said test signal receiving component with a predetermined value (Figure 3, S100, S101, S102, S103, S104, S105).

Regarding claims 8, 9, 19 and 20, Gerstel discloses test signal sending component notifies the determination result of said determination means to said another network node apparatus and sending component transmits the test signal after notifying said determination result (pages 1and 2, paragraphs 0024-0027).

Regarding claims 10 and 21, Gerstel discloses in Figure 3 for measuring at least one of BER (Bit Error Rate), S (Signal)/N (Noise) ratio, the power of the test signal, and the wavelength of the test signal as said signal quality.

Regarding claims 11 and 22, Gerstel discloses in Figure 6 the transparent transmission is performed.

Regarding claim 23, Gerstel discloses in Figures 4-7 and 10, a fault location detecting method for use in a network system having a plurality of network nodes (e.g.,

Figure 6, 80, 84, 86, 90) (hereinafter referred to as nodes) connected via a transmission line, comprising steps for:

sending out a test signal from a terminal node of said transmission line to a working system path (current path) after switching said working system path to an auxiliary system path (stand-by path) in response to occurrence of a fault (Figure 5, page 2, paragraph 0030);

folding back the test signal to said terminal node in a node that has received the test signal (Figure 5, page 2, paragraph 0031); and

determining the signal quality of the test signal folded back to identify the fault location based on the determination result in said terminal node (Figure 5, page 2, paragraph 0030).

Regarding claim 24, Gerstel discloses in Figures 4-7 and 10, a fault location detecting method for use in a network system having a plurality of nodes (e.g., Figure 6, 80, 84, 86, 90) connected via a transmission line, comprising steps for:

sending out a test signal from a terminal node of said transmission line to a working system path(current path) after switching said working system path to an auxiliary system path (stand-by path) in response to occurrence of a fault (Figure 5, page 2, paragraph 0030);

sending out the determination result to said terminal node by determining the signal quality of the test signal in a node that has received the test signal (Figure 5, page 2, paragraph 0030); and

identifying the fault location based on the determination result in said

terminal node that has received the determination result (Figure 5, page 2, paragraph 0029).

Regarding claim 25, Gerstel discloses in Figures 4-7 and 10, a fault location detecting method for use in a network system having a plurality of nodes connected via a transmission line, comprising steps for:

sending out a test signal from a terminal node of said transmission line to a working system path (current path) after switching said working system path to an auxiliary system path (stand-by path) in response to occurrence of a fault (Figure 5, page 2, paragraph 0030);

sending out the determination result to said terminal node by determining the signal quality of the test signal in a node that has received the test signal (Figure 5, page 2, paragraph 0030);

identifying the fault location based on the determination result in said terminal node that has received the determination result (Figure 5, page 2, paragraph 0029); and

sending out the test signal from the node having sent out the determination result to said working system path if there is no fault detected during the operation of the identifying step (Figure 5, page 2, paragraph 0030, S122)

Regarding claim 26, Gerstel discloses for extending the node for sending out the test signal by every one hop in succession from the node having sent out said determination result (page 2, paragraphs 0029-0031).

Regarding claim 27, Gerstel discloses in Figure 4, terminal node is each of a start node and an end node of said transmission line.

Regarding claims 28 and 29, Gerstel discloses a fault location detecting method for use in a network system having a plurality of nodes connected via a transmission line, comprising steps for:

sending out a test signal from each of a start node and an end node of said transmission line to a node located in the center of a working system path (current path) after switching said working system path to an auxiliary system path (stand-by path) in response to occurrence of a fault (Figure 5, page 2, paragraph 0030);

folding back the test signal to each of said start node and said end node in the node located in the center of said working system path that has received the test signal(Figure 5, page 2, paragraph 0031);

identifying the fault location based on the determination result by determining the signal quality of the test signal folded back at each of said start node and said end node (Figure 5, page 2, paragraph 0029); and

releasing the nodes outside a fault interval in said working system path to set up the other path, if there is any fault detected in either said start node or said end node during the operation of the identifying step (page 3, paragraph 0033).

Regarding claim 30, Gerstel discloses a step for folding back a wavelength signal to said terminal node after converting the wavelength of the test signal into the wavelength signal on said transmission line where the fault has occurred in the node having received the test signal (See Figure 7).

Regarding claim 31, Gerstel discloses the determination result is sent out using a channel that may or may not be different from the channel having received the test signal in the node that sends out the determination result to said terminal node (Figure 5, page 2, paragraph 0029).

Regarding claims 32 and 33, Gerstel discloses for extending the node for folding back the test signal by every one hop in succession from said terminal node (page 2, paragraphs 0029-0031).

Regarding claim 34, Gerstel discloses extending the node for folding back the test signal by every one hop in succession from said terminal node (page 2, paragraphs 0029-0031); and

folding back the test signal via the nodes outside said working system path, if there is any fault detected during the operation of the extending step(See Figure 7).

Regarding claim 35, Gerstel discloses in Figure 3, the signal quality of the test signal is determining by measuring at least one of BER, S/N ratio, the power of the test signal and the wavelength of the test signal.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Alagar et al. U.S. Publication no. 2003/0169470. Cassette/machine optically coupled interface

b. Kirby. U.S. Patent no. 6,647,208. Hybrid electronic/optical switch system

c. Shiragaki et al. U.S. Publication no. 2004/0057375. Ring network for sharing protection resource by working communication paths

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dzung Tran

Dzung Tran
07/19/2006